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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/715,119

11/18/2003

Kiyohito Mukai

L8462.03118

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24257

7590

04/18/2006

STEVENS DAVIS MILLER & MOSHER, LLP

1615 L STREET, NW

SUITE 850

WASHINGTON, DC 20036

EXAMINER

DOAN, NGHIA M

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

N.A

Office Action Summary	Application No.	Applicant(s)	
	10/715,119	MUKAI ET AL.	
	Examiner	Art Unit	
	Nghia M. Doan	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Responsive to communication Election/ Restriction for application 10/715,119 filed on 11/18/2005 and Applicants amended filed on 03/06/2006 claims 1-2 are pending.

Claims 3-17 have been canceled.

Claim 1 has been amended.

2. The new drawings are accepted.

3. Applicant's arguments based on amended claim 1 has been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claim 1 is objected to because of the following informalities: the claim language is not consistent to the applicant specification. In the Remark filed on 03/06/2006, Applicants indicate that claim 1 is supported by paragraph [0092], page 22, lines 8-15 in the application's specification, which disclose the ratio between the total area of contact holes in said wires and the total area the layout said wire, but the limitation of claim 1 does not disclose any relating to the area of contact holes and the layout of wires. Therefore, claim 1 must be revised in appropriate to the application's specification.

5. Moreover, claim 1 recited, "the ratio", "the layout of the contact holes" and "the layout of wires", there are insufficient antecedent basic for these limitations in the claim. Appropriate correction is required.

Claim interpreted

6. Claim 1 has been amended the word "*ratio*", which ordinary means *the relationship in quality, amount, or size between two or more things*.

7. Furthermore, the application specification is not clearly described what is mean of the "contact holes". Therefore, examiner interprets as broadly reasonable for the mean of term "*contact holes*" as "*contact units*", "*vias*", "*via units*", "*via cells*", "*via holes*", or "*through-holes*".

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato (US 6,732,345).**

10. **With respect to claim 1**, Kato discloses a semiconductor device layout inspection method for inspecting formation defects that will occur in wires of a chip layout (col. 2, ll. 20-29), wherein the wire formation defects are detected by checking the ratio between the layout of the contact holes (*via/via cell*) in said wires and the layout of said wires (col. 41, ll. 41-65, col. 3, ll. 6-38 and ll. 55-67, col.4, ll. 50-63, and col. 5, ll. 35-47).

11. **With respect to claim 2**, Kato discloses the semiconductor device layout inspection method according to Claim 1, wherein the layout of wires where wire formation defects have been detected is corrected (col. 1, ll. 66-67 and col. 2, ll. 1-3, col. 4, ll. 64-67, and col. 5, ll. 48-50).

12. **Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Umemura et al. (Umemura) (US 6,884,637).**

13. **With respect to claim 1**, Umemura discloses a semiconductor device layout inspection method for inspecting formation defects that will occur in wires of a chip layout (the Abstract, col. 2, ll. 16-67, col. 3, ll. 1-62, and col. 35, ll. 61-66), wherein the wire formation defects are detected by checking the ratio between the layout of the contact holes (col. 6, ll. 34-40) in said wires and the layout of said wires (col. 7, ll. 35-54 and col. 8, ll. 53-65; col. 12, ll. 45-67 and col. 13, ll. 1-16; col. 35, ll. 61-66, col. 36, ll. 28-59).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghia M. Doan whose telephone number is 571-272-5973. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghia M. Doan
Patent Examiner
AU 2825
NMD

A. M. Thompson
Primary Examiner
Technology Center 2800

